

REMARKS

I. Formalities

Applicants request that the SB08A forms, accompanying the Information Disclosure Statement of June 28, 2004, be initialed and made of record. Applicants request that the Examiner return initialed copies of the SB08A forms to the correspondence address.

II. Amendments to the Claims

Claim 1 is presently amended to better capture the envisioned commercial embodiments. The support for the amendments to claim 1 can be found throughout the specification and originally filed claims and figures. Specifically, support for new claim 1 can be found in at least the paragraphs 0017, 0018, 0020, 0043, 0044, 0046, 0050, 0054, 0058, 0063, 0065 and 0071 of the published application (U.S. Pregrant Publication No. 2005/0113657). Accordingly, no new matter has been introduced by way of the amendment. After entry of the amendment, claims 1-7 and 9-44 will be pending.

III. The Office Action Of October 20, 2006

A. Rejection of Claims 1-7 and 9-35, 37-38 and 40-44 Under 35 U.S.C. §103 is Moot

The Office Action of 20 October 2006 rejects claims 1-7, 9-35, 37-38 and 40-44 under 35 U.S.C. 103(a) as allegedly “being unpatentable over Alcala *et al.* ‘405 (previously cited) further in view of Lakowicz *et al.* ‘534 (previously cited).” Office Action of October 20, 2006, page 2. Without agreeing with the Examiner, Applicants have amended claim 1 to better capture the envisioned commercial embodiments. Applicants assert that the claim amendment renders moot the outstanding obviousness rejection. Applicants request reconsideration and withdrawal of the obviousness rejection.

In particular, Applicants assert that the references, combined in the manner outlined in the Office Action of 20 October 2006, fail to render obvious the presently claimed invention.

The Office Action establishes that Alcala *et al.* ‘405 does not disclose “the sensing element containing at least one binding protein adapted to bind with at least one target analyte and at least one reporter group associated with the binding protein...” Office Action, page 3,

third full paragraph. Therefore, by admission, the cited reference fails to teach a sensing element and a reporter group. The Office Action then states, “Lakowicz *et al.* ‘534 teaches the use of a periplasmic binding protein (GGBP) to determine the presence or concentration of glucose in a sample, wherein the sensing molecule has a detectable quality that changes in a concentration-dependant manner, contains at least one binding protein adapted to bind with an analyte, at least one reporter group that undergoes a luminescence change upon binding of the binding protein to the analyte, the luminescence change including a detectable change in fluorescent decay time and a reference group (col. 3, line 66 – col. 5, line 25), wherein fluorescein is the reporter group and rhodamine is the reference group.” Office Action, page 4, first full paragraph. The Office Action continues stating, “Lakowicz *et al.* ‘534 teaches that for a GGBP-based sensor, the conformational mobility needed for the sensor to work properly should readily occur in polymeric supports...” Office Action, pages 6-7. Even assuming *arguendo* that the Office Action is correct in its characterization of Alcalá and Lakowicz, neither cited reference teaches or suggests the combination of elements of the present claims. Namely, neither Alcalá nor Lakowicz teach or suggest a matrix adapted to transduce a luminescence change upon specific binding of the periplasmic binding protein to the target analyte, as the current claims require. Thus, the combination of Alcalá and Lakowicz, as outlined in the Office Action of October 20, 2006, does not teach each and every limitation of the claimed invention. Accordingly, Applicants assert that the cited combination of references fails to establish a *prima facie* case of obviousness over the presently claimed invention. Because all claims other than claim 1 either directly or indirectly depend from claim 1, the combination of references fails to establish a *prima facie* case of obviousness over claims 2-7, 9-35, 37-38 and 40-44. Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of claims 1-7, 9-35, 37-38 and 40-44.

B. Rejection of Claims 36 and 39 Under 35 U.S.C. §103 is Moot

The Office Action of October 20, 2006 rejects claims 36 and 39 under 35 U.S.C. 103(a) as allegedly “being unpatentable over Alcalá *et al.* ‘405 further in view of Lakowicz *et al.* ‘534, as applied to claim 1 above, and further in view of Darrow *et al.* ‘651 (US Application No.

2002/0043651).” Office Action, page 6, first full paragraph. Without agreeing with the Examiner, Applicants have amended claim 1 to better capture the envisioned commercial embodiments. Applicants assert that the claim amendments have rendered moot the outstanding obviousness rejection. Applicants request reconsideration and withdrawal of the obviousness rejection.

The Office Action establishes that the combination of Alcala and Lakowicz does not teach a “device comprising at least one reference group....” Office Action, page 6, second paragraph. As discussed above, however, the present claims require the periplasmic binding protein to be embedded in a matrix adapted to transduce a luminescence change upon specific binding of the periplasmic binding protein to the target analyte as the current claims require. The addition of Darrow does not rectify this deficiency because Darrow does not disclose a matrix adapted to transduce a luminescence change upon specific binding of the periplasmic binding protein to the target analyte, as the current claims require. Thus, the combination of Alcala, Lakowicz and Darrow fails to teach each and every limitation of the claimed invention. Accordingly, Applicants assert that the cited combination of references fails to establish a *prima facie* case of obviousness over the presently claimed invention. Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of claims 36 and 39.

Conclusion

Applicants presently amend claim 1. Because the specification fully supports the amendments to claim 1, the amendments do not introduce new matter. Furthermore, Applicants assert that the amendment to claim 1 has rendered moot all rejections under 35 U.S.C. §103.

Should the Examiner believe that further discussion of any remaining issues would advance the prosecution, he or she is invited to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114
U.S. Application No. 10/721,797

A9287

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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